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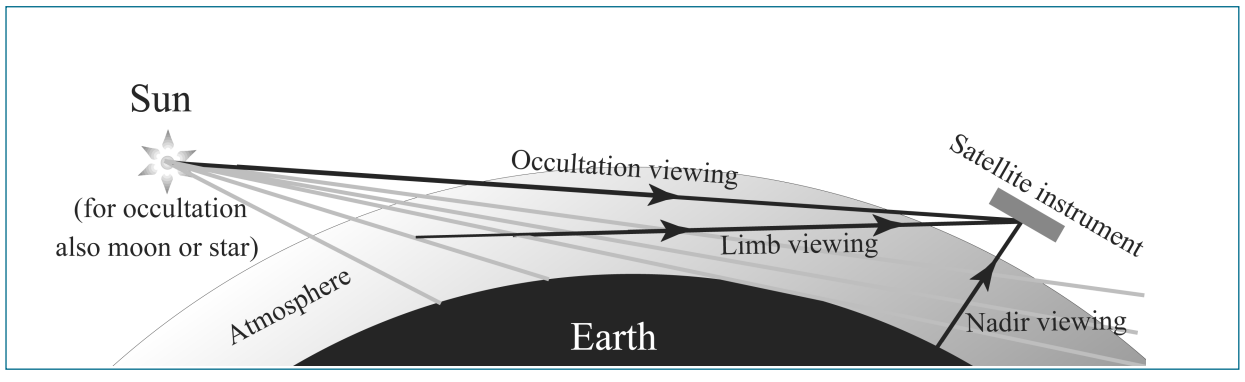
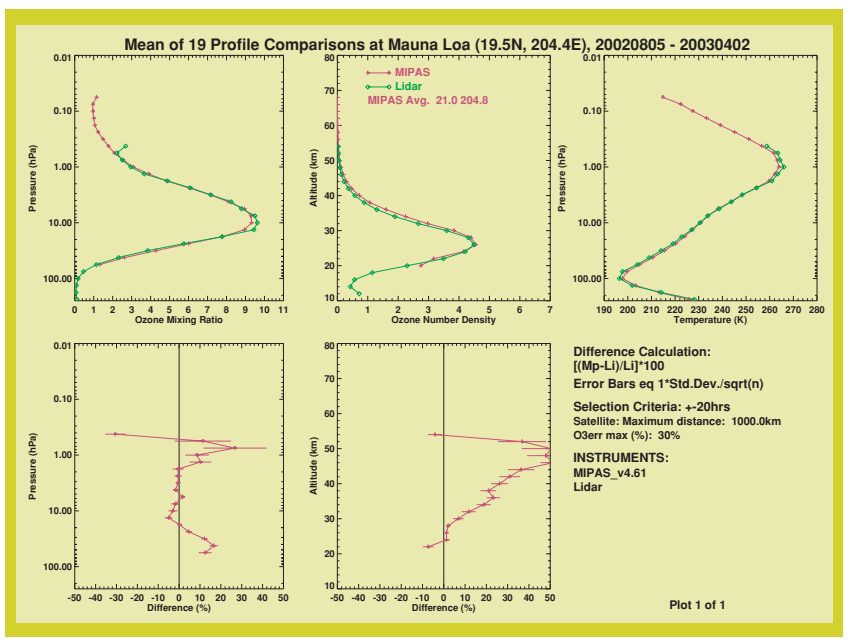
Data access: please contact EOHelp@esa.int for access to the ESA data

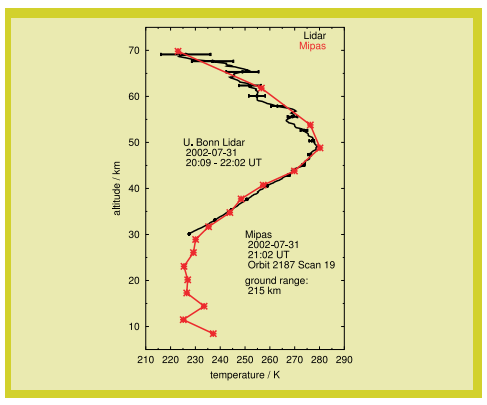


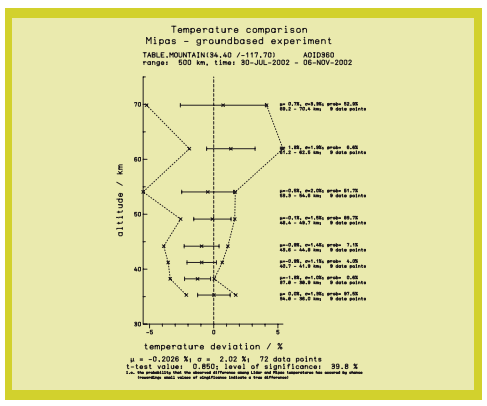
MIPAS

- **Full Name:** Michelson Interferometer for Passive Atmospheric Sounding.
- **Method:** MIPAS is a Fourier transform spectrometer detecting the Earth's limb emission in the midinfrared.
- **Product availability:** Initial focus has been on the other two instruments and a large-scale validation analysis has not yet started. Nevertheless, MIPAS ozone and temperature profiles have been validated using lidar data. Another data source is IMK institute in Karlsruhe. Their processing will gradually become available.
- **Results:** Results are shown for ozone and temperature. Complication in the analysis is presence of an altitude shift due to Envisat's attitude problem. Note that MIPAS altitudes for T(r) have been converted from pressure and hence avoiding this pointing problem.
- **Conclusions:** These are preliminary results which will be extended to much larger data sets. MIPAS ozone profiles agree to within 10% with lidar (20–45 km). MIPAS temperature profiles shows to have an accuracy and precision of about –0.3 K and 4 K, respectively.



MIPAS OZONE. Profiles collocated with LIDAR at Mauna Loa (Hawaii, USA) (within 1000 km and 20 hrs). Both on a PRESSURE-VMR and ALTITUDE-DENSITY scale. Note the altitude shift, cq pointing problem.

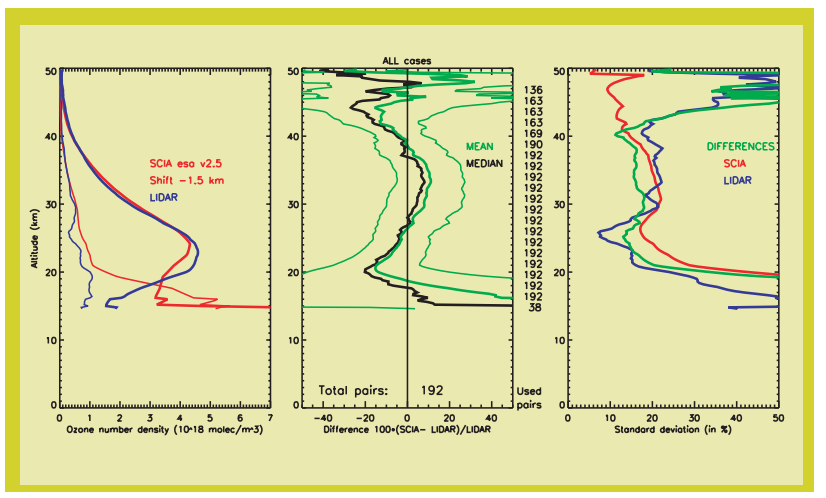




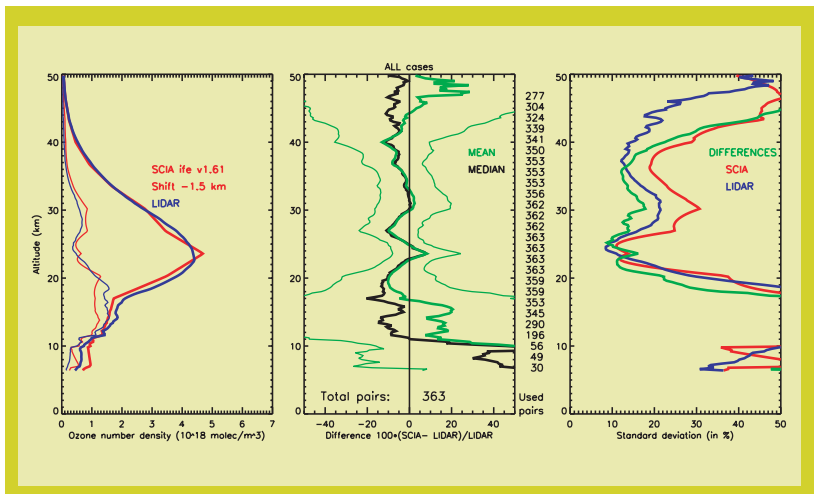
MIPAS TEMPERATURE. Profile comparison (LEFT) with lidar at Esrange (Sweden). Averaged validation results for profiles collocated with Table Mountain Facility (California, USA) within 500 km and 2 hrs.

SCIAMACHY

- **Full Name:** Scanning Imaging Absorption Spectrometer for Atmospheric Cartography
- **Method:** SCIAMACHY has an UV-VIS-NIR spectrometer for observations in nadir- and limb-viewing mode, and in solar/lunar occultation-viewing mode. Ozone profiles are from LIMB observations.
- **Product availability:** Limb observations are performed on the dayside resulting in over 1000 profiles per day. From ESA processing (D-PAC), profiles are available starting December 2004 (ESA version 2.5). From institute IFE (Uni. Bremen) processing, profiles are available for Jan, Mar, May, Sept and Nov 2004 (IFE version 1.61). Temperature profiles from the NIR spectra are hampered by the ice built-up on these channels.
- **Results:** Ozone profile comparisons are shown both for ESA and for IFE data. As ENVISAT platform has an inaccurate pointing, altitude axis of limb profiles are incorrect. Therefore, an altitude shift of –1.5 km has been applied to SCIAMACHY profiles.
- **Conclusions:** Profiles from ESA agree within –10 to +10% (22–42 km) with lidar. More than 20% of the ozone profiles from ESA have unrealistic values. Profiles from IFE agree within 0 to –10% (17–44 km) with lidar profiles, except around 24 km.



SCIAMACHY (ESA v2.5). OZONE comparison of averaged SCIA and LIDAR results (collocations within 1000 km and 20 hrs).



SCIAMACHY (IFE v1.61). OZONE comparison of averaged SCIA and LIDAR results (collocations within 1000 km and 20 hrs).

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